

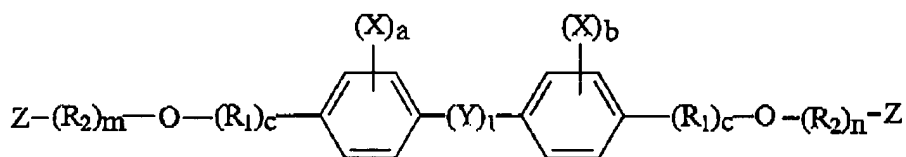
IN THE CLAIMS

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TC 1700

1. (currently amended) A method of manufacturing a replica, which method comprises the provision of a bondable resin composition between a mold and a substrate or a blank, carrying out a curing treatment and removing the replica thus manufactured from the mold, which replica ~~comprises~~ includes the substrate and the reproduction of the mold provided thereon, ~~characterized in that~~ the curing treatment is a UV light-initiated cationic polymerization, the resin composition used being a compound ~~comprising~~ with at least two cationically polymerizable cyclic ether groups, which only shows signs of gelation when at least 50% of the conversion that can be achieved in the mold under the relevant curing conditions has taken place.

2. (currently amended) A ~~The method as claimed in~~ of claim 1, ~~characterized in that wherein~~ the resin composition further comprises a reactive diluent.

3. (currently amended) A ~~The method as claimed in~~ of claim 1, ~~characterized in that wherein~~ the compound is represented by the following general formula:



wherein:

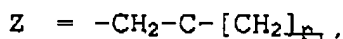
Y = -O-, -SO₂-, -CH₂-, -C(CF₃)₂-, -C(CH₃)₂-,

X = a halogen or CH₃,

R₁ = -CH₂-, -C(CH₃)₂-,

R₂ = -OCH₂CH₂-, -OCCH₃HCH₂-, -OCH₂CCH₃H-, -OCH₂CHOHCH₂-,

R₃



O

 $R_3 = H, C_nH_{2n+1},$
 $n = \text{an integer} \geq 1,$
 $p = 1-4,$

m, a, b, c are each individual integers in the range from 0-4.

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4. (currently amended) A The method ~~as claimed in~~ of claim 1, ~~characterized in that~~ wherein the compound is selected from the group formed by 1,2,7,8-diepoxyoctane, 3,4-epoxycyclohexylmethyl-3',4'-epoxycyclohexanecarboxylate, bis(3,4-epoxycyclohexylmethyl)adipate, bis(3,4-epoxycyclohexylmethyl)adipate and C12-C14-alkylglycidylether and the corresponding oxetane compounds thereof, in particular 1,4-bis[(3-ethyl-3-oxetanylmethoxy)methyl]benzene.

5. (currently amended) A The method ~~as claimed in~~ of claim 1, ~~characterized in that~~ wherein for the reactive diluent use is made of a compound selected from the group formed by butylglycidylether, heptylglycidylether, octylglycidylether, allylglycidylether, p-t-butylphenylglycidylether, phenylglycidylether, cresylglycidylether, diglycidylether of 1,4-butanediol, diglycidylether of neopentylglycol, diglycidylether of polypropeneglycol, vinylcyclohexanedioxide, diglycidylether of recorcinol, diglycidylether of polypropeneglycol and diglycidylester of linoleic acid dimer and the corresponding oxetane compounds thereof.

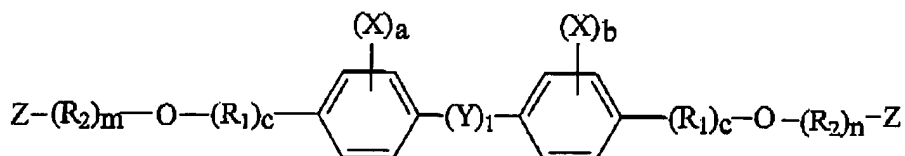
6. A replica obtained by carrying out a UV light-initiated cationic polymerization of a compound comprising at least two cationically polymerizable cyclic ether groups, which compound only exhibits gelation when at least 50% of the conversion that can be achieved in the mold under the relevant curing conditions has taken place, if necessary in the presence of a reactive diluent.

7. (currently amended) A ~~The replica as claimed in~~ of claim 6, ~~characterized in that~~ wherein this replica comprises a relief structure on at least one side, which relief structure must meet high (sub-micron) requirements with a view to the necessary accuracy of form.

8. (currently amended) A ~~The replica as claimed in~~ of claim 6, ~~characterized in that~~ wherein the replica obtained is an optical component.

B1 9. (currently amended) A ~~The replica as claimed in~~ of claim 8, ~~characterized in that~~ wherein the optical component obtained is an (a) spherical lens, a lens array, a prism, a grating or another relief structure for optical applications, or a combination thereof.

10. (currently amended) A ~~The replica as claimed in~~ of claim 7, ~~characterized in that~~ wherein the compound is represented by the following general formula I:



wherein:

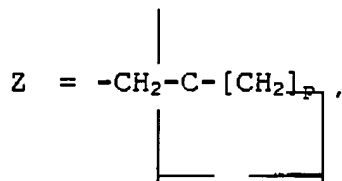
Y = -O-, -SO₂-, -CH₂-, -C(CF₃)₂-, -C(CH₃)₂-,

X = a halogen or CH₃,

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$$R_1 = -CH_2-, -C(CH_3)_2-,$$

$$R_2 = -OCH_2CH_2-, -OCCH_3HCH_2-, -OCH_2CCH_3H-, -OCH_2CHOHCH_2-,$$

$$R_3$$


O

$$R_3 = H, C_nH_{2n+1},$$

$$n = \text{an integer} \geq 1,$$

$$p = 1-4,$$

m, a, b, c are each individual integers in the range from 0-4.

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11. (currently amended) A The replica ~~as claimed in~~ of claim 8, ~~characterized in that~~ wherein the compound is selected from the group formed by 1,2,7,8-diepoxyoctane, 3,4-epoxycyclohexylmethyl-3',4'-epoxycyclohexanecarboxylate, bis(3,4-epoxycyclohexylmethyl)adipate, bis(3,4-epoxy-6-methylcyclohexylmethyl)adipate and C12-C14-alkylglycidylether and the corresponding oxetane compounds thereof, in particular 1,4-bis[(3-ethyl-3-oxetanylmethoxy)methyl]benzene.

12. (currently amended) A The replica ~~as claimed in~~ of claim 9, ~~characterized in that~~ wherein for the reactive diluent use is made of a compound selected from the group formed by butylglycidylether, heptylglycidylether, octylglycidylether, allylglycidylether, p-t-butylphenylglycidylether, phenylglycidylether, cresylglycidylether, diglycidylether of 1,4-butanediol, diglycidylether of neopentylglycol, diglycidylether of polypropeneglycol, vinylcyclohexanedioxide, diglycidylether of recorcinol, diglycidylether of polypropeneglycol and diglycidylester of

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linoleic acid dimer and the corresponding oxetane compounds thereof.
